



EXECUTIVE

Patrick Griffis

Education Vice President

Glen Pensinger

Chairman/Board of Editors

Barbara H. Lange

Executive Director

JOURNAL STAFF

Joel Welch

Director of Education
914-205-2379

Dianne Ross Purrier

Managing Editor
914-205-2377

Jeffrey Victor

Advertising Manager
224-436-8044

Pete Putman

Guest Editor

SMPTE Motion Imaging Journal (ISSN: 1545-0279) published 8 times per year by the Society of Motion Picture and Television Engineers, 3 Barker Ave., White Plains, NY 10601. Periodicals postage paid at White Plains, NY, and at additional mailing office.

Copyright © 2014 by the Society of Motion Picture and Television Engineers, Inc. All rights reserved. Printed in the U.S.A. No part of this issue may be reproduced without written permission of the publisher. Statements and opinions expressed in articles or editorials in the SMPTE Motion Imaging Journal are expressions of contributors and do not necessarily represent the policies or opinions of the Society.

MEMBERSHIP in SMPTE is available according to qualifications. A complete list of membership types and benefits is available at www.smpte.org.

Advertisements appearing in this publication are the sole responsibility of the advertiser.

Subscription rates: U.S./Canada, \$180.00; Non-U.S./Canada, \$195.00 (shipping included); Single copy, \$20.00, plus shipping.

SMPTE owns the copyrights to all published material, unless otherwise stated.

SMPTE Motion Imaging Journal is registered with Canada Post: CPM # 41003019.

POSTMASTER: Send change of address to SMPTE Motion Imaging Journal, 3 Barker Ave., White Plains, NY 10601.

Printed in the USA

Publication Design by Cavich Creative, LLC
www.cavich.com

Reports

Message from the Executive Director Barbara H. Lange	5
Report from the Standards Vice President Alan Lamshead	6
NABShow's Technology Summit on Cinema: Recap	10
Section Meetings	16

Technical Papers

A Compact 120 Frames/sec UHDTV2 Camera with 35mm PL Mount Lens H. Shimamoto, T. Yasue, K. Kitamura, T. Watabe, N. Egami, S. Kawahito, T. Kosugi, T. Watanabe, and T. Tsukamoto	21
Development of a Multilink 10 Gbit/sec Mapping Method and Interface Device for 120 Frames/sec Ultrahigh-Definition Television Signals T. Soeno, Y. Nishida, T. Yamashita, Y. Kusakabe, R. Funatsu, and T. Nakamura	29
A Design Approach to Creating Scalable Video Processing Systems Beyond UHDTV1 on an FPGA Benjamin Cope and David Shih	39
Higher Frame Rates for Television R. Salmon, T. Borer, M. Pindoria, M. Price, and A. Sheikh ...	50
Themed Entertainment: From Analog to Digital Rick Rothschild	56

Departments

SMPTE Sustaining Members	4
Call for Papers: SMPTE Motion Imaging Journal Student Issue	8
Call for Papers: SMPTE 2014 Annual Technical Conference & Exhibition	9
SMPTE Almanac Michael Dolan	61
Obituary	62
Sustaining Membership Application	64